



Friends of Science in Medicine

Newsletter 26—02 October 2020

The power of one!



Britt Hermes: (credit to Micah Dahlberg)

Britt Hermes is a science communicator and biomedical researcher with a unique background.

After earning a ‘doctorate’ in naturopathic medicine in the US, she practised there as a licensed naturopath for three years. She quit in 2015, after realising that it was riddled with quackery.

Since then, Britt has been a vocal critic of her former profession. This has brought much praise but also many objections. In 2019, she won a lawsuit brought by a high-profile US naturopath who sued her for defamation.

That lawsuit came with the potential for great financial and emotional cost. As Britt had just learned she was pregnant when the suit was lodged, she didn’t need the extra stress levels that brought. Fortunately, Australian Skeptics initiated a grassroots fundraising campaign, which brought international support and raised enough to cover her likely legal costs in just nine days, and brought great peace of mind. Now in Germany, she is completing a PhD in evolutionary biology.

A long-standing member of UK-based Sense about Science’s [Voice of Young Science](#), she continues to dedicate herself to educating the public on the realities and failings of naturopathy. She blogs ([Naturopathic Diaries](#)), speaks at conferences and publishes in [Science-Based Medicine](#), [KevinMD](#), [Science 2.0](#), and [Forbes](#).



[The UK Skeptic magazine](#) gave her *Naturopathic Diaries*, "aimed at contextualising the false information proliferated by the naturopathic profession" the 2016 Ockham Award for Best Blog.

The [John Maddox Prize](#), a joint initiative of the charity, Sense about Science, and of the leading international scientific journal *Nature*, recognises the work of individuals who, despite challenges or hostility, promote science and evidence, advancing public discussion around difficult topics. Hermes was [joint winner in 2018](#), “in recognition of her advocacy and writing on evidence-based medicine”.

FSM wishes Britt every success in her career .

Inside this Issue:

The power of one!	1	Pharmacy & CAM (Column)	6
Should selling Therapeutic Goods by MLM be banned?	2	The Parlous State for Protecting Consumers from Health Care	7
MLM of a ‘Miracle’ water pump	3	FSM Executives in the Media	8
TGA & CAM(Column)	4	Edzard Ernst: What can we conclude from the evidence on homeopathy?;	9
Veterinary Medicine & CAM (Column)	5	Recent Publications by Friends	10



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Should selling therapeutic goods by Multi-level Marketing be banned?

Think Multi-level Marketing (MLM) – and company names like Amway and Tupperware will spring to mind. However, [just 10% of Amway's agents in Britain make any profit](#) and 94% of Tupperware's active distributors continue to remain on the lowest level of their pyramid. Amway and its sister companies under Alticor [reported sales of \\$8.8 billion in 2018](#), while Tupperware's [sales in 2019 were \\$1.8 billion](#).

MLM companies are notorious for selling overpriced products. Much of their profit [goes to their top level distributors](#). Those earnings are emphasised and championed at seminars and conferences, encouraging their audiences to join. They spread the illusion that everyone can make good money.

In 2019, the TGA's [Advertising Compliance Annual Report](#), raised concerns that, "*The nature of multi-level marketing [MLM] and direct selling*" posed particular risks in relation to the advertising of therapeutic goods.



The TGA's concerns about MLM focused on the "*high degree of independence of the end seller from the 'parent' company and the often high number of 'end sellers'*". MLM conferences inevitably employ high-profile 'motivational' and 'wealth-building' speakers and showcase their few successful members. While new products might be mentioned, the focus remains on enlarging the pyramid by increasing membership. While understanding cleaning products and plastic containers is not difficult, the failure of MLM members to understand the therapeutic goods they are selling is contentious, especially when the therapeutic claims lack credible evidence and might do more harm than good.



By January 2020, all 'bioresonance' devices, including the [BICOM](#), [had been removed](#) from the Australian Register of Therapeutic Goods. However, by February, a new MLM scheme started promoting the 'Healy', a 'bioresonance' device from the German device manufacturer [TimeWaver and Healy World GmbH](#). This scheme was launched via the 'Healy Australian Tour', and continues to be promoted at 'Mind, Body, Spirit' festivals, and at a series of workshops, 'livestreams' and [webinars](#). Controlled *via* Bluetooth by smartphone software, the Healy is a portable descendant of the now delisted BICOM device.

Costing anywhere from \$850 to \$3,500, depending on the programs included in the purchase, Healy management claims their device delivers more than 140,000 frequencies, with frequencies for depression, obesity, boosting immunity, treating bacterial infections, curing allergies and for many illnesses of specific organs of the body – including the heart, liver and lungs. Mental health, 'compulsive behaviour' and 'mental balance' are also mentioned.

The marketing hypocrisy is underlined by therapeutic claims being subjected to a rider advising that "*The Healy is not intended to cure, treat, mitigate, diagnose or prevent disease*".

World-wide, according to Healy, their sales are projected to ["surpass \\$100 million"](#) in the company's second year, with their 'master distributor' claiming that he has already earned more than \$1 million in commissions!

On 11 May 2020, the company entered the US market and reported ["\\$3 million in sales, \[with\] around 20,000 units sold in the first week."](#) The company claims to be fully licensed and operating in 45 countries through their [55,000 'members'](#), which includes more than 2,000 doctors, alternative practitioners and other therapists.

On 22 November 2019, the Healy device was registered by the FDA Section under section 510(k) for ["Transcutaneous electrical nerve stimulator \[TENS\] for pain relief"](#). There is [insufficient high quality evidence](#) to support or refute TENS for pain, but if you want to try TENS, you can buy a device for [less than \\$100](#), a substantially lower cost than the Healy.



If you are considering joining the 'Healy team', and if you believe that you can improve the health of patients, you are being misled and might be breaking the law. If you believe that you will make money, you will be severely disappointed unless you are at the top of the pyramid.

Banning MLM, even for therapeutic goods whose efficacy *has* been demonstrated, might be the only way to protect the public from dangerous MLM promotions.

Loretta Marron OAM, CEO, FSM



The Multi-level Marketing of a 'Miracle' water pump

Multi-level marketing (MLM) schemes can be sustained only with an endless supply of new sellers who profit. However, as the market becomes saturated with low-turnover, no-profit suppliers, MLM causes financial loss, broken families and failed relationships.

Dangerous, [cringeworthy behaviour associated](#) with MLM and therapeutic claims [was reported in December 2019](#). At the height of the Samoan measles outbreak, a local salesman charged people for the privilege of being sprayed with Kangen water, claimed to prevent measles.



Kangen water is just ordinary water lacking scientific evidence that it can prevent or treat any disease. According to the marketing, it has amazing therapeutic properties after passing through a Kangen water device/pump/filter thingy (whatever it does). The marketing says the device was created by a genius Japanese engineer. How does it work? It's just a matter of paying \$5,600 AUS, connect it to a power outlet, connect it to a water tap, and for that you get... clean water, the same as if you didn't spend all that money.

In Australia, Enagic Pty Ltd, in Macquarie Park NSW, appears to be at the top of the scheme. Their website is extensive, but relatively tame about therapeutic claims. However, the red flags waved when I found a \$1,500 invitation to a [sales conference on Facebook](#). I found other evidence of Kangen water being associated with MLM – purchase a device, set up your own company, and you become part of “The next megatrend”. I also found details of the “commission system”, [whereby you earn money from the sellers you enrol](#).

Enagic Australia Pty Ltd
Change your water ... Change your life.

I found numerous small, generally unregistered, companies selling the device. Two indicate an association with Enagic. Many appeared to only exist on Facebook. The therapeutic claims are a worry; claims about cancer cells and alkaline water; ‘Lowers your risk of a heart attack by 41%’, ‘Kangen water can reduce risks of colon & bladder cancer by 50%’. All clearly breach the [Therapeutic Goods Advertising Code](#).



Using MLM in the therapeutic goods marketplace generates desperate sales people, willing to carry financial risk based on nothing but false hope. These ‘mum and dad’ operations have no idea that they might be breaking the law. The regulators know that they’ll incur a bad press if they’re seen to be heavy-handed with small businesses. All the while, the supplier at the top of the scheme is distanced from the illegal advertising. If a small operation, contacted by the TGA, removes their Facebook page, it’s not difficult to replace them through another profitable sales conference.

More than two months after I complained to the TGA, I’ve had no response. One small unregistered company has disappeared from Facebook. Hopeless!

With many thanks to my FSM colleagues who brought this to my attention - you know who you are.

Mal Vickers, Researcher, Monash University School of Public Health.



Therapeutic Goods Administration (TGA) and CAM

Column by Mal Vickers

Evans in Wonderland



Mal Vickers

In a now infamous video posted to his 1.4 million Facebook followers, celebrity chef [Pete Evans promoted a \\$15,000 device, a so-called 'BioCharger'](#) for treating Wuhan coronavirus. "Curiouser and curiouser!" (credit to Lewis Carroll, of whom more below).

Evans appeared to admit that the device was inexplicable, [it] "...will take you down some rabbit holes and it will take me an hour or two to explain it". 'Rabbit holes' have become part of common English, thanks to Lewis Carroll's *Alice in Wonderland*, whose adventures began after falling down a rabbit hole.

Pete "I am under no obligation to make sense to you" Evans's antics include:

- * questioning the fluoridation of water;
- * promoting bone broth for young babies (which contained excessive Vitamin A);
- * suggesting that sunscreen is toxic;
- * advising a follower with osteoporosis against consuming dairy products;
- * promoting anti-vaccinationist Joseph Mercola; and
- * questioning the efficacy of face masks.



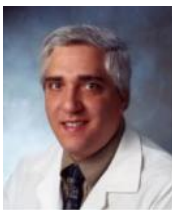
BioCharger

Why, sometimes I've even believed "as many as six impossible things before breakfast." However, this is just the tip of an iceberg. I wonder if he can be seen "through the looking glass".

In a recent Facebook post (4 Aug 2020), Evans questioned penalising Victorians who breached COVID-19 restrictions, and raised concerns about methods to test the efficacy of vaccines; something to do with "the New World Order".

"If one drinks much from a bottle marked 'poison,' it's almost certain to disagree with one sooner or later."

One of the hallmarks of pseudoscience, according to [Dr Steven Novella](#), is a hostility to criticism. Evans certainly rejects criticism. He's also notorious for blocking followers who share dissenting views on social media. Should this happen to you, I recommend joining ['Blocked by Pete Evans' Facebook group](#) (18K likes). Also, for a hilarious take-down of Evans's antics, I highly recommend following the Twitter parody account 'Pandemic Pete Evans'.



"We're all mad here!"

Steven Novella Evans is not the first to disappear down the rabbit hole while remaining in the media spotlight. There are Andrew Wakefield and Arthur Conan Doyle (creator of Sherlock Holmes – and a spiritualist). Such celebrities are immune to reason and expert advice. "I give myself very good advice, but very seldom follow it."

However, could Evans be merely a construct of the media's insatiable appetite for controversy? Or is this just over-the-top marketing for his humble cookbook? I just wish the media would stop putting a microphone in front of him. When the cupcake provided is quack medical advice with a sprinkling of anti-vaccination rhetoric, it's no longer an investigation of someone's cognitive dissonance; it is just plain dangerous.

"But that's the point. If you don't think, you shouldn't talk".

Mal Vickers, Researcher, Monash University School of Public Health.



Veterinary Medicine and CAM

Column by Tanya Stephens

TCM and the donkey skin trade

Ejiao, a gelatin made from boiling donkey skins and used in Traditional Chinese Medicine (TCM) “reduces wrinkles, cures anaemia, boosts energy, enhances libido and shrinks tumours”. Demand is growing from the increasingly health-conscious and ageing Chinese population. Not surprisingly, ejiao is promoted to treat COVID-19. TCM manufacturer, Dong-E-E-Jiao, is reported to have donated vast quantities to Chinese hospitals for treating COVID-19.



Tanya Stephens

It is estimated that the industry requires [4.8 million skins annually](#) to keep up with production. Between 2013 and 2016, annual production increased from 3,200 to 5,600 tons – requiring 4.8 million skins. According to the FAO, the domestic supply of donkeys has reduced from 11 million in 1992 (the largest donkey herd in the world) to 4.6 million in 2017. The China Statistical Yearbook, however, puts the number at 2.6 million. Only 1.8 million skins can be sourced domestically. The rest comes from global trade with 3.5 million imported in 2016. It has been suggested that the donkey could be extinct in 10 years.

Because donkeys are slow breeders, there is no way that there will be sufficient supply. The global demand has led to the collapse of donkey populations in places supplying skins, such as Brazil, Kenya, Kyrgyzstan, Botswana and Ghana. In Nigeria, for example, up to 1 million are slaughtered annually.

Thankfully, countries such as [Kenya and Uganda have recently banned the export of donkey](#) products to China. Although only 5 countries stood against the trade in 2017, now there are 18. However, it’s not all good news. The problems are regulation and enforcement. Donkey theft, illegal cross-border movements and inhumane slaughter occur. Where the trade is legal, it has become large, complex and basically unregulated with no monitoring of welfare or tracing the source of skins. Despite a ban on the trade, Ghana has reopened a slaughterhouse. The donkey trade has been linked to criminal activities such as the illegal trade in wildlife and drug cartels in South America and terrorism in Afghanistan.



The animal welfare impacts are significant, ranging from long distance transport, through poor handling, sourcing sick and pregnant animals and starvation, to inhumane slaughter. Because the skins are easier to remove when the animals are thin, they are often left to starve before slaughter. The environmental impacts of rotting carcasses can be severe and of course there are biosecurity risks and risks of zoonotic diseases.

It’s not just an animal welfare issue. Surviving donkeys in communities dependent on donkeys are overworked. It is estimated that between 100-125 million working donkeys, horses and mules are essential to the livelihoods of some of the world’s poorest communities. It is estimated that, globally, 95% of donkeys are kept for work. They support communities by providing a means to make vital contributions to sustainable development. The skin trade leads to short-term economic gain and long-term social cost. In Ethiopia, for example, donkeys have great socioeconomic value as transport for education and making money. Donkey ownership also confers status within communities and eases the burden, particularly for women, of carrying loads of water and firewood.

You can read more about the trade in a document from the Donkey Sanctuary. [Under the Skin](#) report updated November 2019.

Tanya Stephens BVSc (USyd) MSc IAWEL (Edin) MANZCVS FRCVS (Animal Welfare).



Pharmacy and CAM

Column by Ian Carr

‘Secret shopper’ sting reveals pharmacists’ deficits

University of Sydney ‘pseudo-patients’ requested the herbal product St John’s Wort from a number of pharmacies (*The Australian Journal of Pharmacy*). The ‘patient’ was taking digoxin, verapamil and candesartan – a plausible story.

St John’s Wort is considered to be ‘potentially harmful’ due to well-known interactions – the subject of a 2000 Therapeutic Goods Administration (TGA) warning.



Ian Carr



Harm prevention advice was provided by 17% of pharmacists and 11% of pharmacy assistants. Best practice would have seen referral to the pharmacist, and thence to the patient’s doctor.

In my own pharmaceutical practice, I endeavour to provide only the best evidence-based information. Many appreciate this. However, we providers of evidence-based medicine face a tsunami of lax regulation, market power, dubious but slick advertising, exploitation of legal loopholes and outright regulatory support for anything which might return a buck or earn foreign exchange.

I recently tried to purchase Blackmore’s St John’s Wort on-line. The TGA are obviously quite happy for this product, labelled ‘Dietary Supplement’, to reach the public, with no indication of potential therapeutic issues. It can be plucked off supermarket shelves by a 10-year-old. The gravest ‘warning’ from the on-line *Superpharmacy* is: “Read the warnings before purchase.” Difficult if the warnings are attached to the bottle.



To the TGA, legislators and academics! We can’t have it both ways. We can’t have a TGA-listed (AUST L) product which implies ‘low risk’ when real risk exists for some users.

France considers the risk serious enough to ban it. Even the TGA advice for seven out of ten interaction scenarios is: “Stop taking it!”

If pharmacist intervention is desirable, I suggest that this ‘dietary supplement’ be re-scheduled to Schedule 3 – “Pharmacist Only”, or Schedule 4 – “Prescription Only”.

If, on the other hand, future research allays our safety fears, I will resume sprinkling the stuff over my cornflakes.

Ian J Carr, BPharm MPS, is a retired Pharmacist from Taree, NSW.

A ‘WIKILEAKS’ FOR DODGY PHARMACY PRACTICES



Attention pharmacy workers!

To gather stories and data about how Complementary Medicines are being managed in Australian pharmacies today, FSM Pharmacy Facilitator, Ian Carr, has set up an email address:

pharmacy.CAM.leaks@gmail.com, where you can share your stories.



The Parlous State for Protecting Consumers from Health Care Fraud

From its inception, Friends of Science in Medicine (FSM) has sought to partner with the Australian Health Practitioners Regulation Agency (AHPRA). The Agency oversees the work of 15 health Boards (Medicine, Nursing, Pharmacy etc) charged with ensuring that registered practitioners practise evidence-based care and, as required by the 'National Law', make only evidence-based claims when advertising.



John Dwyer

It soon became obvious that hundreds were breaking the law and that the relevant Boards were not responding. This was especially egregious amongst Chiropractors, Osteopaths and Traditional Chinese Medicine practitioners.

Over the last 9 years, FSM has met many times with the receptive AHPRA's senior executive. It became obvious that the senior team, lacking individuals with clinical or scientific credentials, was totally dependent on the advice from its Boards. The inaction of some Boards was partly due to the fact that some Board members were themselves guilty.



A most constructive outcome arose when FSM gave AHPRA hundreds of examples of false claims, each of which it was required to investigate. A new unit was established to take a 'class action' approach; those thought to be in breach were given a timetable for correcting their advertising. Failure would result in the possibility of disciplinary action. As a result, about 40% of those notified made appropriate corrections.

That leaves AHPRA with a significant case-load for further investigation, despite insufficient 'Regulatory Advisors' to follow up in a timely fashion. The 'detectives' present their recommendations to the appropriate Board.

But the statute which determines the actions AHPRA, itself, can take has a major weakness. AHPRA and its Boards can determine which claims can be *advertised*, but not what they actually *do* to patients.

This would never pass the 'pub test'.

Here is an extreme example of dangerous and frustrating intransigence. The Chiropractic Board of Australia (CBA) has made it clear that there it has no recognised sub-specialties. Despite this, many chiropractors claim to have specialist skills in 'neurology'. They offer 'Functional Chiropractic Neurology': numerous neurological problems are caused because cells in our brains stop interacting with each other. These practitioners suggest that massage of parts of the body or spinal manipulation etc are somehow linked to specific areas of the brain. This can send "wake-up!" messages, resulting in repair and re-engagement with other cells, thus curing a staggering number of conditions.

Claims are made for ADD/ADHD, multiple sclerosis, Parkinson's disease, migraines, autism and so on and on. *There is no scientific evidence to support any of these claims*, accurately described as 'Chiro-quackery'. FSM brought this to the attention of AHPRA and the CBA in 2014. Year after year, we have been told that investigations are ongoing, with numerous changes of investigators. Meanwhile, children with attention deficit syndromes, for example, are being subjected to non-evidence-based interventions by chiropractors – despite evidence-based care being available. Just this month, FSM was informed that the CBA, at its July meeting, could not make a final decision and that discussion resumes in October. The old truism, "*justice delayed is justice denied*" can be adapted to the above scenario as "*decisions delayed can see consumers denied needed protection*".

The matter should have been settled in 2014. As is so often illustrated in these newsletters, consumer protection from health care fraud remains seriously inadequate.

Professor John Dwyer, Foundation President Friends of Science in Medicine



FSM Executives in the Media

Coronavirus, sports supplements and Traditional Chinese Medicine are some of the topics the FSM Executive was interviewed about or published about since the last newsletter.

- * [Hidden dangers lurk in many sports supplements](#)
- * [Australians warned not to write off Russia's coronavirus vaccine](#)
- * [Russian government's vaccine claims spark safety concerns from experts](#)
- * [Telstra trolls 5G conspiracy theorists who claim the wireless technology causes coronavirus](#)
- * [Marches put our virus progress at risk](#)
- * [Health experts say COVID-19 swab tests are safe and do not damage the blood-brain barrier](#)
- * [The Therapeutic Goods Administration must do better](#)
- * [Weighing up the potential benefits and harms of comprehensive full body health checks](#)
- * [Independent Review of the Therapeutic Goods Advertising Framework: Recommendations](#)
- * [Complementary medicine weight loss products complaints submitted to the TGA in 2018-2019](#)
- * [Towards independence from commercial interests in health](#)
- * [TGA stakeholder survey 2019](#)
- * [The TGA and COVID-19: Starting to use its compliance teeth!](#)

(and where and when they were published) to our CEO, at scienceinmedicine@bigpond.com

Congratulations!



FSM Exec Member, Dr Paulina Stehlik, received two teaching awards this year for her work in teaching clinicians Evidence Based Practice.

She was awarded both [*The Educator Rising Star 2020*](#) and the Faculty of Health Sciences and Medicine - Bond University, *Faculty Early Career Teaching Excellence Commendation 2020*.

The Educator (Higher education edition) has recognised FSM co-founder Professor Marcello Costa as one on Australia's most outstanding educators.

The list includes 50 education professionals who have made significant contribu-

tions in the higher education space over the past 12 months. The contributions range from championing the latest tech innovations, establishing new standards of best practice in Australian education, demonstrating educational leadership, to coming up with outstanding research and research impact.

Professor Costa also recently received a 2020 Officer of the Order of Australia (AO) for distinguished service to higher education and to medical research in the field of neurophysiology, and to professional scientific bodies.





A SPECIAL REPORT FROM EDZARD ERNST

What can we conclude from the evidence on homeopathy?

“Prof Ernst is far too critical about homeopathy!”

“He is biased against it!”

“He cherry-picks the evidence!”

“He does not understand homeopathy!”

If you are one of the many who believe such notions, please read on.

The website of the UK National Health Service (NHS) has a fairly detailed account of homeopathy. Here is the section entitled “**What can we conclude from the evidence?**” – but I recommend reading the full text:



Edzard Ernst

There have been several reviews of the scientific evidence on the effectiveness of homeopathy.

The House of Commons Science and Technology Committee said there’s no evidence that homeopathy is effective as a treatment for any health condition.

There’s no evidence behind the idea that substances that cause certain symptoms can also help treat them.

Nor is there any evidence behind the idea that diluting and shaking substances in water can turn those substances into medicines.

The ideas that underpin homeopathy aren’t accepted by mainstream science, and aren’t consistent with long-accepted principles on the way the physical world works.

The Committee’s 2010 report on homeopathy said the “like cures like” principle is “theoretically weak”, and that this is the “settled view of medical science”.

For example, many homeopathic remedies are diluted to such an extent that it’s unlikely there’s a single molecule of the original substance remaining in the final remedy. In cases like these, homeopathic remedies consist of nothing but water. Some homeopaths believe that, as a result of the succussion process, the original substance leaves an “imprint” of itself on the water. But there’s no known mechanism by which this can occur.

The 2010 report said: “We consider the notion that ultra-dilutions can maintain an imprint of substances previously dissolved in them to be scientifically implausible.” Some people who use homeopathy may see an improvement in their health condition as the result of a phenomenon known as the placebo effect.

If you choose health treatments that provide only a placebo effect, you may miss out on other treatments that have been proven to be more effective.

Since 1948, homeopathy had been part of the NHS, there were 5 homeopathic NHS hospitals, and the costs for homeopathy were covered. Why would the NHS decision makers suddenly turn against it? They must have loved homeopathy for at least 4 reasons:

- * It is inexpensive.
- * It has support in high places.
- * It did not cause any direct harm.
- * It had many supporters who fought tooth and nail for it.

It is therefore hardly reasonable to assume that the NHS is biased against homeopathy.

But, why do they now say that it is

- * implausible,
- * not effective beyond placebo, and
- * can cause harm by making people miss out on effective therapies?

The answer is simple: BECAUSE THESE STATEMENTS ARE IN ACCORDANCE WITH THE OVERWHELMING MAJORITY OF THE BEST EVIDENCE AVAILABLE TO DATE.

So, here you are: the NHS now confirms what I (and many other experts) have been saying since years. And we all insist on the fact that this not because we are biased, stupid, uninformed, paid by BIG PHARMA, or want to deprive anyone of anything. We do it for one reason only:

BECAUSE IT’S THE TRUTH!;





RECENT RELEVANT PUBLICATIONS BY FRIENDS

Edzard Ernst

- * [The journal 'HOMEOPATHY' has gone from bad to worse](#)
- * [The use of Traditional Chinese Medicines to treat SARS-CoV-2 may cause more harm than good](#)
- * [Intravenous high-dose vitamin C therapy: what are the dangers?](#)
- * [Chiropractic: Not All That It's Cracked Up to Be](#)

Timothy Caulfield

- * [The world is flat, Bring on reiki, homeopathy and all that other bunk](#)
- * [Experts debunk 'immunity boosting' myth amid pandemic](#)
- * [EDITORIAL: Consider your sources](#)

Forbes: Steven Salzberg

- * [Three Promising Treatments For Covid-19: No Cure Yet, But Progress](#)
- * [Some Weird Truths About Viruses, And The Covid-19 Virus](#)
- * [I Was Wrong: We Can't Skip Phase 3 Vaccine Trials](#)

Science-based Medicine

- * Steven Novella [UK Recommendations Wrong on Acupuncture](#)
- * Harriet Hall [Visual Stress](#)
- * David Gorski [Does convalescent plasma work against COVID-19? Who knows?](#)
- * Clay Jones [Emerging Evidence of Intrauterine SARS-CoV-2 Infections](#)
- * Scott Gavura [Vitamin D supplements do not reduce the risk of depression](#)
- * Jann Bellamy [Expert review warns against compounded bioidentical hormone therapies](#)

Respectful Insolence (David Gorski)

- * [Joe Mercola: Celebrating 23 years of promoting quackery and antivaccine misinformation](#)
- * [Sputnik-V: A Russian con job on its COVID-19 vaccine](#)
- * [On "Doing your own research"](#)

Skeptical Raptor

- * [Genetically modified mosquitos are coming to Florida – saving humans](#)
- * [HPV vaccine effectiveness – 14 year follow-up of women, all good news](#)

Skeptical Inquirer

- * [Stuart Vyse: COVID-19 And The Tyranny Of Now](#)
- * [Stuart Vyse: Brazilian Skeptics Take Center Stage In The COVID-19 Crisis](#)
- * [Susan Gerbic: Grief Vampires – An Update](#)
- * [Ada McVean: Am I Drunk, Hungry, Or Both? Alcohol As An Appetite Stimulant](#)
- * [Wendy M. Grossman: Letter To America: A Short Tour Of Thirty Years Of British Skepticism](#)
- * [Richard Wiseman: Hocus Pocus: Bringing Skepticism to New Audiences via Comics](#)

The Question of Science Institute (IQC)

- * [São Paulo bill makes long-term research programs unfeasible](#)
- * [When superstition wears a lab coat](#)



Dr Alice Howarth • Michael Marshall
 Dr Karl Kruszelnicki • Jo Benhamu • Mandy Lee-Noble
 Dr Renaud Joannes-Boyau • Dr Erik Streed
 Prof Adrian Barnett • Dr Michael Foley • Gary Bakker
 Prof Tanya Smith • Ross Balch
 Jonas Larsen • Prof Jonti Horner • Nathan Eggins
 Plus a panel on the effectiveness of the TGA
 Plus a panel on challenges of climate adaptation

Skepticon2020 is full steam ahead with a completely online conference this year!

From our very own Dr Karl with a curiosity that just won't quit, to Marsh and Alice from UK's Skeptics with a K, we have a fantastic line-up of speakers to sharpen those critical thinking skills and educate you on a range of science and skeptical topics facing the world today.

Head over to <https://www.skepticon.org.au/> for the most up to date information on our speakers and program and we look forward to hosting you soon.

Tickets: Available via the website. Contact: gcskeptics@gmail.com

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